

Remarks/Arguments

Objection to the Drawings

The Examiner objected to the drawings under 37 C.F.R. §1.83(a) for failing to show every feature specified in the claims. Applicant has accordingly cancelled the element identified as impermissible by the Examiner from the claim. Applicant respectfully submits that the drawings are now in condition for allowance.

Rejection of Claim 16 under 35 U.S.C. §112

The Examiner has rejected Claim 16 for including allegedly new matter, specifically with respect to radial holes along the full length of the body of the roller. Applicant has accordingly cancelled the element identified as impermissible by the Examiner from the claim. Applicant respectfully submits that Claim 16 is now in condition for allowance.

Rejection of Claim 16 under 35 U.S.C. §103

The Examiner rejected Claim 16 as being unpatentable over Farnsworth (US 1,832,974) in view of Atkins (US 1,120,432) and Faeber (US 3,037,557) and the admitted prior art, paragraph [0003] thru [0008].

Applicant respectfully requests reconsideration and passage to allowance of claim 16 as amended.

Farnsworth can be considered the closest prior art, since it includes several of the features of the current invention as claimed.

Farnsworth discloses a **paper making machine** and **not a paper converting machine**. The technical problem is the suction of water from the pulp felt (see page 1 line 56, 2nd column) and not to convert already made paper, as defined in claim 16 (for example paper web cut and folded into paper towels).

said machine comprising a roller for sheets, Farnsworth discloses a suction roller, not a conveying roller. The action of the roller is to remove water from the pulp felt, not to convey paper sheets. In claim 1 sheets need to be conveyed by suction since they are loose elements and cannot adhere to a roller. The felt of Farnsworth is continuous and travels on the shell of the roller (line 54, page 1), but it is not conveyed by water suction the roller,

said roller comprising:

a first cylindrical shaped tubular body having interior and exterior surfaces and a plurality of radial holes ; Farnsworth discloses in figure 1 a cluster of radial holes and not a longitudinal row of holes. This is because Farnsworth has the object of suction of water and not of leading the head or the tail of a sheet, like claim 16 defines.

a second fixed cylindrical shaped tubular body arranged coaxially within said first cylindrical shaped tubular body, said first cylindrical shaped tubular body capable of rotation relative to said second fixed tubular body, and

two spaced stationary, but slidable, sealing elements positioned between said first cylindrical tubular body and said second fixed tubular body, said two slidable sealing elements arranged at a determined angle with respect to each other and extending radially from said second fixed cylindrical shaped tubular body for slidably engaging with said interior surface of said first fixed cylindrical shaped tubular body to define at least one suction chamber between said first and second cylindrical tubular bodies, Farnsworth causes suction of water to dry the pulp felt, whereas claim 16 defines air suction for gripping the paper in order to convey it.

said slidable sealing elements longitudinally oriented and extending for all the length of said roller, said second fixed tubular body defining at least one suction chamber for communicating with a suction generating system, said at least one suction chamber extending for all the length of the roller and suitable for being brought selectively in communication with at least one of said

radial holes during the relative rotation of said bodies, see above, Farnsworth causes water suction not along a row, whereas claim 16 defines air suction at a row of holes to pick up the end of a sheet of paper in order to convey it for a selected angle;
said second fixed tubular body having at least one opening to said at least one suction chamber enabling said suction generating system to communicate with said suction chamber, see above, Farnsworth does not apply suction to a end of a paper sheet, but to a continuous paper pulp in a drying process. The continuous paper pulp is not conveyed by the shell of Farnsworth, but travels on it. Farnsworth does not disclose a sliding radial movement and a resilient reaction of the sealing bars. This is necessary in claim 1 due to high speed rotation in paper converting machines.

The technical problem is to convey sheets at a high speed, picking up each sheet at an end of the sheet by a row of suction holes, as depicted in figure 4 and 5 of the present application. The features of claim 16 that are missing from Farnsworth define claim 16 as novel and non obvious of the references.

It is not hinted anywhere in the Farnsworth specification to try to modify the roller in order to use it as sheet conveying roller with all the features of claim 16, and therefore this limitation would not be appreciated by one of ordinary skill in the art.

Farnsworth to solve this problem, and would not look at Atkins, which also teaches a machine for suction of excess water in a paper making machine that has a longitudinal bar with a plurality of holes and slides against the inner surface of the tubular rotating roller. Moreover, for water suction Atkins uses a completely different solution.

Also, the person with ordinary skill in the art, in an attempt to modify Farnsworth to solve this problem, would not look at Faerber, who provides a rotary vacuum cylinder in order to apply tension in a continuous paper web, such as in printing or milling or laminating paper, that generates a very small amount of heat (see column 1 lines 30-35). The roller of Faerber leaves an

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uncovered portion of roller between two chambers. This portion is useful for cooling the sealing strips and the sealing frames.

Faerber does not convey paper sheets, and for this reason teaches away from the invention.

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Conclusion

Applicant respectfully submits that the present application is in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully submitted,

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